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PATENT SPECIFICATION

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DRAWINGS ATTACHED



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(54) IMPROVEMENTS RELATING TO COUNTERS AND THE LIKE STRUCTURES

(71) We, HARRIS & SHELDON (DISPLAY) LIMITED, a British Company of 45, College Road, Perry Barr, Birmingham, 22, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to counters for displaying and holding goods or stock in shops, stores, warehouses, showrooms and the like, and of the kind which also include storage space for the goods or stock below the top, and which are made up from pre-fabricated components so that they can be readily assembled, when desired, on site. Such counters are hereinafter referred to as "the kind described."

The present invention consists in a counter of the kind described comprising pre-formed components including a metal skeletal base frame which in use is disposed substantially horizontally, two or more metal skeletal space frames which are detachably connectable to the base frame so that in use they are upright and substantially parallel to each other, the base being spaced from the floor on legs detachably connectable to the base frame which legs are short relative to the height of the space frames, and a generally upright panel detachably mountable against upwardly extending end members of the space frames to which end members the panel is connectable in such manner that the space frames are prevented from rocking about their connections to the base frame.

In the retail trade it is often a requirement that equipment such as counters be readily collapsible and erectable so that changes in the layout of equipment in an area can be easily and speedily accomplished. This requirement may be dictated by fluctuations in trade of different types of goods, for example, seasonal goods.

Where a shop or store is to be re-equipped counters according to the inven-

tion are particularly advantageous in that due to the speed with which the counters can be erected the changeover of equipment can be carried out over a very short period, for example overnight, and thus trade need not be affected.

The counter according to the invention meets this requirement, providing a counter which in the collapsed state occupies a minimum of space but in the assembled state provides a rigid, strong structure for a counter. As only a minimum of space is occupied by the counter in the collapsed condition large numbers of such counters can be transported at once as for example when re-equipment of a shop or store is to be accomplished.

The detachable connections between two parts of the counter may comprise a hook projecting from a surface of one part and an aperture provided in a surface of the other part, the arrangement being such that when the parts are connected the surfaces of the parts which immediately surround the hook and the aperture are in face-to-face relationship.

Preferably the base frame is rectangular and the space frames trapezoidal although of course the space frames could be rectangular. In a short counter two space frames may be sufficient, but where a longer counter is to be provided there are preferably three or more space frames.

The frames are conveniently formed from L-section members rigidly connected together, as by welding, with one flange of each member directed towards the centre of the frame, and the other flanges of the members forming together a continuous peripheral rim of the frames. In the base frame the L-section members are preferably arranged with the inwardly directed flanges horizontal and the rim flanges depending vertically. Where an extra transverse member is provided to which a third space frame is to be attached it is also of L-section and

[Price 5s. 0d. (25p)]

preferably arranged with its one flange horizontal and the other depending.

Where the frames are provided with hooks preferably the hooks are formed out of the metal of the frames on which they are provided whatever section the members of the frames are made from. Where the frames have L-section members the hooks by which one of the space frames is detachably connected to the base frame may be pierced out of a flange of one of the L-section members of one of the flanges, and the apertures with which the hooks inter-engage are slots formed in a flange of one of the L-section members of the other of the frames.

The panel may be provided with mounting parts formed by metal plates or strips suitably secured to the panel. Hooks for connecting the panel to the framework may be pierced and pressed out of either the metal plates or strips or out of the frames, and the apertures may be slots cut out of the frames or the metal plate or strip, as the case may be.

Preferably the panel or one of the panels forms a front of the counter. Where the detachable connections between two of the components are arranged for disengagement by the movement of a first of the two components along a second of the two components in a direction from one edge of the second component, a panel component secured to the first component may be so dimensioned and positioned that when assembled it overlaps that one edge of the second component and prevents such movement and thus the disassembly of the first component from the second component. For example, where the detachable connections between the front panel (a first component) and the space frames (second components) are arranged for disengagement by upward movement of the front panel relative to the space frames, a top panel (a panel component) may be so dimensioned and positioned that when assembled it overlaps the top of the front panel and prevents such upward movement and thus the disassembly of the front panel from the space frames.

A bottom for the counter may be secured to the base frame.

An embodiment of the invention will now be described by way of example with reference to the accompanying drawings in which:—

Figure 1 is an exploded front perspective view of a counter constructed in accordance with the invention;

Figure 2 is an enlarged fragmentary side view of a connection between two frames of the counter;

Figure 3 is an enlarged fragmentary side view of a connection between a front panel and a frame of the counter;

Figure 4 is a perspective view of a mounting part of the front panel;

Figure 5 is a rear view of the connection shown in Figure 3; and

Figure 6 is an enlarged fragmentary plan view of a mounting for a foot of the counter.

As shown in Figure 1, the counter comprises a framework 10, a front panel 11 and a top panel 12. The framework 10 is made up of a base frame 13, two end space frames 14 and an intermediate space frame 15. The base frame is of elongated rectangular shape and formed from metal L-section members 16, 17 welded together with their one flange 18 horizontal and inwardly directed and their other flange 19 depending vertically. An intermediate, transverse member 20 is also welded to the base frame 13 and is of L-section disposed with its one flange horizontal and the other flange depending vertically. The space frames 14, 15 are of similar trapezoidal shape, each having parallel, horizontal top and bottom members 21 and 22 respectively, an upright back member 23 and a forwardly and upwardly inclined front member 24. All the members 21, 22, 23 and 24 are of metal L-section and they are welded together. The members are arranged with their one flange 25 inwardly directed and disposed in a vertical plane. The other flanges 26 of the members form together a peripheral rim of the space frame.

Pierced and pressed out of the rim flange 26 of the bottom member 22 of each space frame 14, 15 at spaced intervals are hooks 27, as shown in Figure 2, which depend below the bottom member and extend in the same direction, in the longitudinal direction of the bottom member. Elongated slots 28 are cut into the horizontal flanges 18 of the end members 16 and the intermediate, transverse, member 20 of the base frame to receive the hooks 27. The end space frames 14 are connected to the end members 16 by first lowering them on to the end members 16 to fit the hooks 27 into the slots 28, and then sliding them along the end members so that the hooks engage under the horizontal flanges 18 at one end of the slots. The intermediate space frame 15 is connected in a similar way to the intermediate member 20 of the base frame. When so fitted the space frames 14 and 15 stand firmly on the base frame.

On the back of the front panel 11 are screwed mounting parts 29 which are of metal plate, as shown in Figures 3 and 4, and each has pierced and pressed out of it a hook 30 which projects from the rear face of the panel 11 and is downwardly directed. These mounting parts 29 are positioned so that the hooks 30 can engage with slots 31 cut out of the rim flange 26 of the

front members 24 of the space frames 14 and 15. The front panel is lowered into position on the framework to engage the hooks 30 in the slots 31 and thus stabilises the structure of the counter in that it prevents the space frames 14, 15 from rocking about their bottom members 22.

The top panel 12 of the counter is connected to the framework 10 by means of plates 34, Figure 1, which are secured at spaced intervals to end edges of the top. These plates 34 depend below the top 12 and are formed into hooks which engage with lugs 35 pierced out of or welded to the inwardly directed flange 25 of the top members 21 of the end space frames 14. The top 12 is slid along the top members of the space frames to engage the hooks with the lugs 35.

When the top panel 12 is assembled on the framework it overlaps the upper edge of the front panel 11. Thus, until the top panel 12 is removed from the framework the front panel cannot be removed because it cannot be lifted to disengage the hooks 30 of its mounting parts 29 from the slots 31 in the front members 24 of the end and intermediate space frames 14 and 15.

Disengagement of the hooks 30 from the slots 31 may alternately, or in addition, be prevented by the use of a catch 32, as shown in Figures 3 and 5, mounted on the rim flanges 26 of the front members 24 above each slot 31. This catch 32 is formed by a pivoted finger 33 which can be swung between a position in which it is clear of the slot 31 to allow the hook to be inserted or released from the slot, and a position in which it extends over part of the slot and bears on the top of the hook when the hook is engaged in the slot to trap the hook in the slot.

If the counter is to have end panels, the end panels may be secured flush against the end frames 15 by screws. Apertures are conveniently formed in the inwardly directed flanges 25 of the members of the end space frames for the screws to pass through to screw into the end panels. The end panels may alternatively be fitted so that they incline from bottom to top away from the end space frames. In this case the end edges of the front panel are inclined so as to meet the front edges of the end panels to which they are suitably secured. A generally triangular fillet is secured to the rear edge of each end panel by which the rear of the end panel is connected, for example by screws, to the rear member 23 of the end frame.

Slats, boards or panels may be secured to the base frame to form a bottom of the counter.

In the corners of the base frame are welded mounting plates 36, Figure 6, for feet 37 of the counter to be secured to the

framework by means of bolts, not shown, engaging with fixing plates 38, Figure 2, of the feet. The feet 37 may be adjustable for height. Mounting plates may be provided at other parts of the base frame for feet.

A number of counters of the form described may be connected together, if desired, either in line or at right angles to one another, as for example to form an island system of counters. In order that abutting ends of two in-line counters may share a foot 37, apertures 39 in the mounting plates 36, Figure 6, adjacent to end members 16 of the base frames of each counter are so positioned that the fixing plate 38 of a foot to be shared can be secured partly to a mounting plate of one counter and partly to a mounting plate of the other counter by bolts passed through the apertures 39 of the two mounting plates. Apertures 40 are also provided in the rear members 17 of the base frame and are so positioned that where two counters are arranged at right angles to one another with the end of one abutting the rear of the other, the fixing plate of a foot to be shared by the two counters can be bolted to a mounting plate of the end-on counter at the apertures 39 and to the rear member 17 of the other counter at the apertures 40.

WHAT WE CLAIM IS:—

1. A counter of the kind described comprising preformed components including a metal skeletal base frame which in use is disposed substantially horizontally, two or more skeletal space frames which are detachably connectable to the base frame so that in use they are upright and substantially parallel to each other, the base being spaced from the floor on legs detachably connectable to the base frame which legs are short relative to the height of the space frames, and a generally upright panel detachably mountable against upwardly extending end members of the space frames to which end members the panel is connectable in such manner that the space frames are prevented from rocking about their connections to the base frame.

2. A counter according to Claim 1 wherein the detachable connections between two parts of the counter comprise a hook projecting from a surface of one part and an aperture provided in a surface of the other part, the arrangement being such that when the parts are connected the surfaces of the parts which immediately surround the hook and the aperture are in face-to-face relationship.

3. A counter according to any one of the preceding claims wherein the base frame is of rectangular shape.

4. A counter according to any one of the preceding claims wherein each of the space

frames is of rectangular or of trapezoidal shape.

5. A counter according to any one of the preceding claims wherein there are three or more space frames.

6. A counter according to any one of the preceding claims wherein at least the outline shape of each frame is defined by L-section members arranged so that one flange of each member is directed inwardly towards the centre of the frame and the other flanges of the members form together a continuous peripheral rim of the frame.

7. A counter according to Claim 2 or any one of the preceding claims dependent on Claim 2 wherein the hooks of the frames of the counter are formed out of the metal of the frames on which they are provided.

8. A counter according to Claim 6 and 7 wherein the hooks by which one of the space frames is detachably connected to the base frame are pierced out of a flange of one of the L-section members of one of the frames, and the apertures with which the hooks interengage are slots formed in a flange of one of the L-section members of the other of the frames.

9. A counter according to any one of the preceding claims wherein the panel is provided with mounting parts formed by metal plates or strips secured to the panel.

10. A counter according to Claim 9, as dependent upon Claim 2 or any preceding Claim so dependent wherein the hooks are formed out of the metal of the mounting parts.

11. A counter according to Claim 9 as dependent upon Claim 2 or any preceding claim so dependent wherein the hooks are provided on the frames, and the apertures with which the hooks interengage are formed out of the mounting parts.

12. A counter according to any one of the preceding claims, wherein the panel or one of the panels forms a front of the counter.

13. A counter according to Claim 12 as dependent on Claim 2 or any preceding

claim so dependent wherein the detachable connections between two of the components are arranged for disengagement by the movement of a first of the two components along a second of the two components in a direction from one edge of the second component, a panel component secured to the first component being so dimensioned and positioned that when assembled it overlaps that one edge of the second component and prevents such movement and thus the disassembly of the first component from the second component.

14. A counter according to Claim 12 or Claim 13 as dependent upon Claim 2 or any preceding claim so dependent wherein the detachable connections between the front panel and the space frames are arranged for disengagement by upward movement of the front panel relative to the space frames and a top panel of the counter is so dimensioned and positioned that when assembled it overlaps the top of the front panel and prevents such upward movement and thus the disassembly of the front panel from the space frames.

15. A counter according to Claim 2 or any preceding claim dependent on Claim 2 wherein catch means are provided releasably to maintain the hooks and apertures in interengagement.

16. A counter according to Claim 15 wherein the catch means each comprise a pivoted finger which is mounted adjacent to an aperture and in its operative condition traps the hook which interengages with that aperture against release from that aperture.

17. A counter substantially as described herein with reference to and as illustrated by the accompanying drawings.

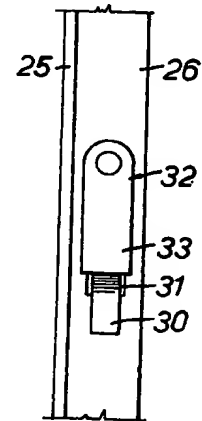
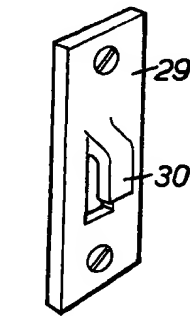
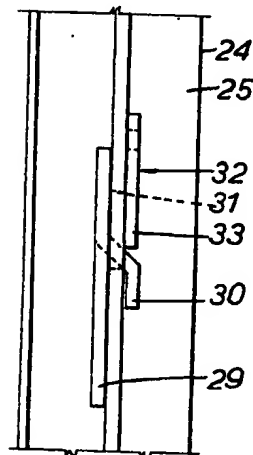
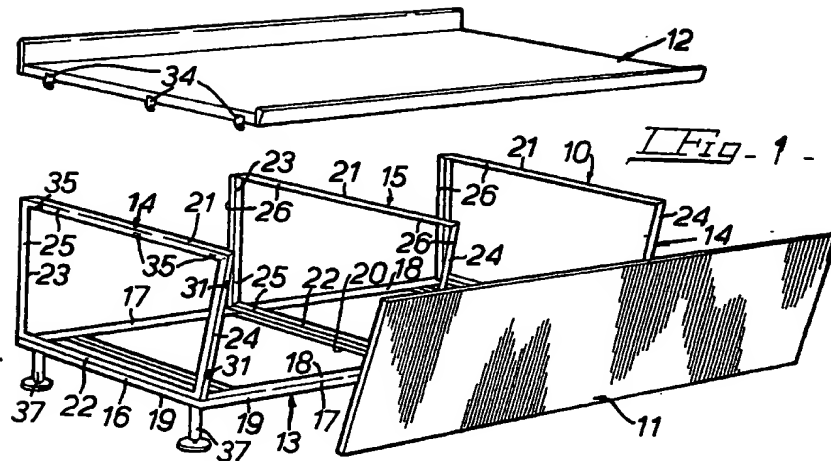
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COMPLETE SPECIFICATION

2 SHEETS

This drawing is a reproduction of
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Sheet 1



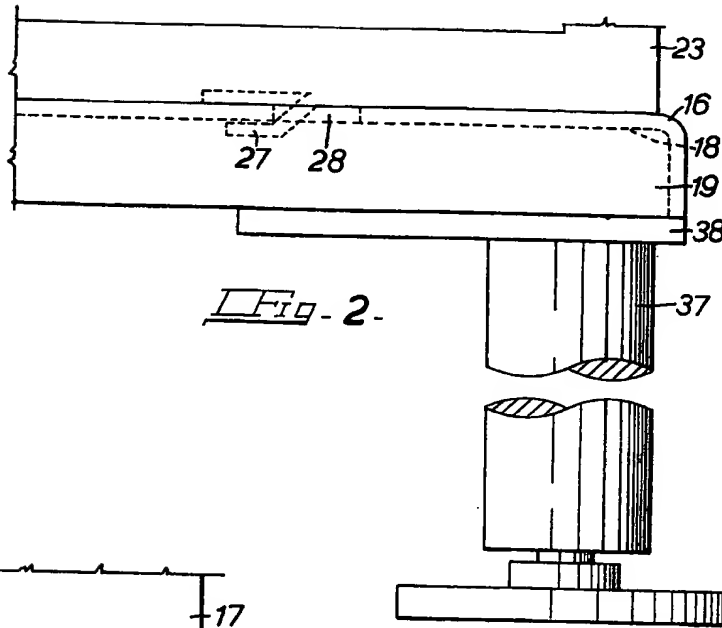


Fig. 2.

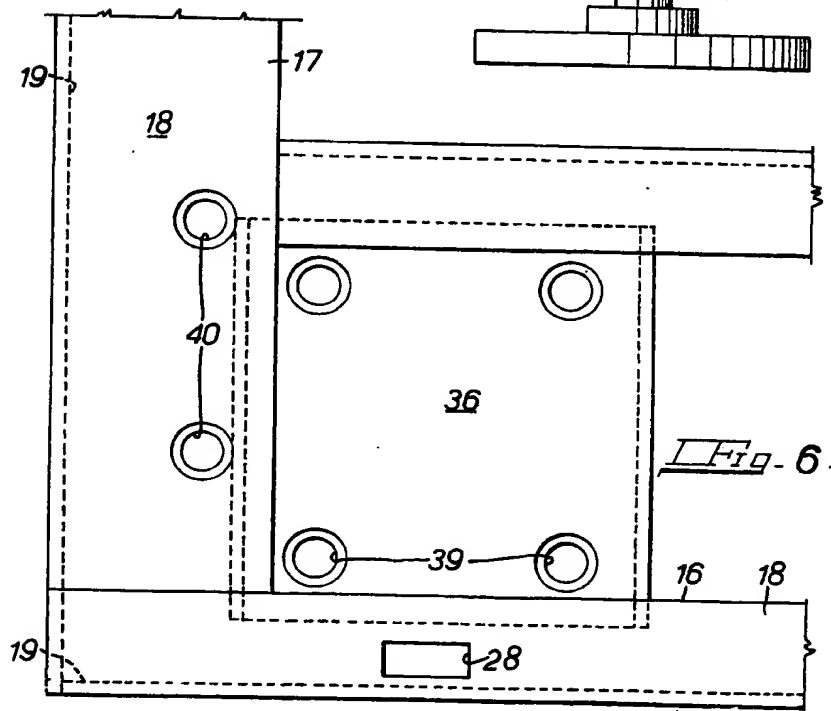


Fig. 6.